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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Pankaj Khandelwal

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EXAMINER

TRAN, DOUGLAS Q

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/651,911

Applicant(s)

KHANDELWAL, PANKAJ

Examiner

Douglas Q. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/(8/30/00)</u> .   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura (US Patent No. 6,678,066 B1).

As to claim 12, Nakamura discloses a method for improved network printing comprising:

filtering a print job prepared by each of the plurality of client machines in a filter (i.e., the print processing section 12 in fig. 2, which would be considered as a function for filtering the print job within the host computer 1 “fig. 1”, col. 6, lines 27-33) embedded in the plurality of client machines (i.e., host computer 1 in fig. 1) (it is noted that the print control device 10, which is located within the host computer 1 “col. 4, lines 63-65”, includes the function of a print processing section 12 “col. 4, line 66 to col. 5, line 1”. The function of the print processing

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section "12 in fig. 2" which would be considered as the filter because after the print processing section receives the print job "col. 6, lines 27-28", it outputs each of the different type of headers in each step of "S101, S102, S105, 106, 109 and S112 in fig. 3"; it also converts one print image into a plurality of command groups "step of S103 in fig. 3; col. 6, lines 32-33"; and it further checks the contents of the print job in the order of the conditions of each print image and each print page "col. 6, lines 36-47, and steps of S107, S110 in fig. 3". Col. 4, lines 24-26 describes that the printer 2 is connected to the host computer 1 via a network. Thus, there inherently are a number of the host computers within the network would connect to the shared printer 2, and the print processing section 12 inherently is embedded in each of the host computers); and

printing the print job on a printer (i.e., the printing device 2 "fig. 1" for printing the print job from the host computer 1).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (pages 1-3 of Background of the Invention) in combination with Okada et al. (US Patent No. 5,880,447).

As to claim 1, Applicant's admitted prior art teaches an apparatus (fig. 1) for improved network printing comprising:

a plurality of client machines (1 in fig. 1) connected to a network (4 in fig. 1, page 2, lines 12-13);

a printer (2 in fig. 1) connected to the network by a network interface controller (3 in fig. 1; page 2, lines 14-16);

a printer server (7 in fig. 1) connected to the printer (2 in fig. 1; page 2, line 14);

a printer controller (5 in fig. 1) connected to the network (page 2, lines 14-15);

Although Applicant's admitted prior art teaches the printer controller 5 converts the print job to printable image data, outputs the data to the printer 2 and controls the printer 2 (page 3, lines 2-3), Applicant's admitted prior art does not teach a header analyzer embedded in a memory of the printer controller.

Okada, in the same field of endeavor "print processing", teaches a header analyzer embedded in a memory of the printer controller (i.e., a print server "5 in fig. 1" which would be considered as a printer controller because that device connects to the printers "6 and 7 in fig. 1" and the network "1 in fig. 1" and controls and outputs the data to printer via the output interface 15 "col. 4, lines 4-8") (col. 5, lines 7-14 describes that the print server checks and judges the contents of the header file of the received print data which locates in the header of print data "col. 4, lines 61-62". Thus, the print server inherently comprises a program embedded in a memory corresponding to a header analyzer for checking and judging the contents of the header of the print data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the print controller 5 of Applicant's admitted prior art to have a header analyzer for processing the header of the print data as taught by Okada. The suggestion

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for modifying the print controller 5 of Applicant's admitted prior art can be reasoned by one of ordinary skill in the art as set forth above by Okada because the modified printer controller would increase the functionalities and efficiencies of the printing system by having the header analyzer for classifying the different types of print data from the host computers. Such a modification allows the printer controller to prepare the proper printing.

As to claim 2, Applicant's admitted prior art and Okada disclose every feature discussed in claim 1, and Applicant's admitted prior art further teaches the network comprises a Local Area Network (page 2, line 9).

As to claim 3, Applicant's admitted prior art and Okada disclose every feature discussed in claim 1, and Applicant's admitted prior art further teaches the network comprises a Wide Area Network (page 2, lines 9- 10).

As to claim 4, Applicant's admitted prior art and Okada disclose every feature discussed in claim 1, and Okada further teaches the header analyzer is adapted to check for any errors preventing proper printing in a print job transferred from the network interface controller (it is noted that the print server "5 in fig 1" purposely avoids any error which can occur for the proper printing. Thus, the header analyzer, which is discussed in claim 1, checks and judges the type of the print data from the header of the print data "col. 5, lines 7-14". For example, if the attached data "a part of the contents of the header of the print job" has not been added, then the print data is transmitted to the printer "col. 5, lines 17-21"; if the attached data of q1 or q2 added to a part of the header of the print job "col. 5, lines 25-27", then the print data would be the security printing "col. 5, lines 31-32" or the copy printing "col. 5, lines 35-37". Thus, the header analyzer is adapted to check for errors preventing proper printing in a print job).

As to claim 5, Applicant's admitted prior art and Okada disclose every feature discussed in claim 1, and Okada further teaches the header analyzer is adapted to fix any errors preventing proper printing in a print job ( it is noted that there are three different types of print data which are processed at the print server "5 in fig. 1, col. 5, lines 7-16". The first type of print data for security is stored in the first queue q1, the second type of print data for copy is stored in the second queue q2 and the third type of print data for ordinary printing is stored in a third queue q3 at the file server 4 "col. 4, lines 9-15". A file server "4 in fig. 1" purposely avoids any error that can occur for the proper printing at the print server so that the file server fixes the contents of a header of the print data. For example, with respect to col. 4, lines 36-45, when the received print request for security "col. 4, lines 10-11", the header of print data is fixed by adding the attached data including the called out ID and the first queue q1; when the received print request for copying, the header of print data is fixed by adding the attached data including the copy data and the second queue q2 "col. 4, lines 52-62". The print server will not process the security or copy of the print data if it does not find the fixed data at the header of the incoming print jobs. The file server inherently comprises a program embedded in a memory corresponding to a header analyzer for checking and modifying the header of the print data. In brief, the header analyzer of the file server is adapted to fix any errors preventing proper printing in a print job.

In additional, both of the file server and the print server are the networked-component servers; and the print server, which would be well known in the prior art, can directly receive the print requests from the host computers. Therefore, it would be obvious to fix the header of the print data by the print server "5 in fig. 1", which would be considered as the printer controller, connecting directly to the printer 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the header analyzer of the printer controller of the combination of Applicant's admitted prior art and Okada for fixing the contents of the header of the print job. The suggestion for modifying the header analyzer of the combination of Applicant's admitted prior art and Okada can be reasoned by one of ordinary skill in the art because the modified header analyzer would increase the functionalities and efficiencies of the printer controller (i.e., the print server) for classifying the different types of print data and preparing the proper printing. Such a modification would increase the time of the print processing at the print server when the print server directly receives the print requests.

As to claim 6, Applicant's admitted prior art discloses a method improved networked printing comprising:

converting incoming print jobs from a network interface controller (3 in fig. 1) connected to a network (4 in fig. 1) into printable image data in a printer controller (5 in fig. 1, page 3, lines 2-3); and

outputting the converted print jobs to a printer (2 in fig. 1, page 3, line 3).

However, Applicant's admitted prior art does not teach the print jobs are monitored and repaired by a header analyzer embedded in the printer controller.

Okada, in the same field of endeavor "print processing", teaches print jobs are monitored and repaired by a header analyzer embedded in the printer controller ( it is noted that there are three different types of print job and the header of the print job which are monitored and processed at the print server "5 in fig. 1, col. 5, lines 7-16". The first type of print data for security is stored in the first queue q1, the second type of print data for copy is stored in the



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second queue q2 and the third type of print data for ordinary printing is stored in a third queue q3 at the file server 4 “col. 4, lines 9-15”. A file server “4 in fig. 1” purposely avoids any error that can occur for the proper printing at the print server so that the file server fixes the contents of a header of the print data. For example, with respect to col. 4, lines 36-45, when the received print request for security “col. 4, lines 10-11”, the header of print data is fixed by adding the attached data including the called out ID and the first queue q1; when the received print request for copying, the header of print data is fixed by adding the attached data including the copy data and the second queue q2 “col. 4, lines 52-62”. The print server will process the security or copy of the print data based on the fixed header of the print job from the file server. The file server inherently comprises a program embedded in a memory corresponding to a header analyzer for checking and modifying the header of the print data.

In additional, both of the file server and the print server are the networked-component servers; and the print server, which would be well known in the prior art, can directly receive the print requests from the host computers. Therefore, it would be obvious to fix the header of the print data by the print server “5 in fig. 1”, which would be considered as the printer controller, connecting directly to the printer 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the contents of print jobs of Applicant's admitted prior art to be monitored and repaired by the header analyzer at the server as taught by Okada. The suggestion for modifying the steps of monitoring and repairing the print jobs of Applicant's admitted prior art can be reasoned by one of ordinary skill in the art because the modified steps of monitoring and repairing the print jobs by the header analyzer that would increase the functionalities and

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efficiencies of the printer controller for classifying the different types of print data and preparing the proper printing. Such a modification would increase the time of the print processing at the print server when the print server directly receives the print requests.

As to claim 13, Applicant's admitted prior art teaches an apparatus (fig. 1) for improved network printing comprising:

a plurality of client machines (1 in fig. 1) connected to a network (4 in fig. 1, page 2, lines 12-13);

a printer (2 in fig. 1) connected to the network by a network interface controller (3 in fig. 1; page 2, lines 14-16);

a printer server (7 in fig. 1) connected to the printer (2 in fig. 1; page 2, line 14);

a printer controller (5 in fig. 1) connected to the printer (2 in fig. 1, page 2, lines 10-12);

and

a networked component (i.e., a printer controller 5, which is one of the network components in the printing system in fig. 1).

Although Applicant's admitted prior art teaches the printer controller 5, which would be considered as the networked component, converts the print job to printable image data, outputs the data to the printer 2 and controls the printer 2 (page 3, lines 2-3), Applicant's admitted prior art does not teach a header analyzer embedded in a memory of the networked component.

Okada, in the same field of endeavor "print processing", teaches a header analyzer embedded in a memory of the networked component (i.e., a print server "5 in fig. 1" which would be considered as the networked component because that device directly connects to the

clients “2 and 3 in fig. 1” via the network 1 and the network interface 11 in fig. 1 “col. 3, lines 23-24”) (col. 5, lines 7-14 describes that the print server checks and judges the contents of the header file of the received print data which locates in the header of print data “col. 4, lines 61-62”. Thus, the print server inherently comprises a program embedded in a memory corresponding to a header analyzer for checking and judging the contents of the header of the print data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the networked component (i.e., print controller 5) of Applicant’s admitted prior art to have a header analyzer for processing the header of the print data as taught by Okada. The suggestion for modifying the networked component (i.e., the print controller 5) of Applicant’s admitted prior art can be reasoned by one of ordinary skill in the art as set forth above by Okada because the modified networked component would increase the functionalities and efficiencies of the printing system by having the header analyzer for classifying the different types of print data from the host computers. Such a modification allows the networked component (i.e., the printer controller 5) to prepare the proper printing.

As to claim 14, Applicant’s admitted prior art and Okada disclose every feature discussed in claim 13, and either Applicant’s admitted prior art or Okada further teaches the networked component comprises the printer (it is noted that Applicant’s admitted prior art teaches the printer “2 in fig. 1” communicates with the clients 1 by receiving the print jobs via the network 4. Thus, the printer 2 would be considered as the network component that processes the print jobs from the clients 1 via the network 4; and Okada also teaches the printers “6 and 7 in fig. 1”

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communicates with the clients “2 and 3 in fig. 1” by receiving the print jobs via the network 1.

Thus, the printer “6 or 7 in fig. 1” would be considered as the network component that processes the print jobs from the clients “2, 3 in fig. 1” via the network 1).

As to claim 15, Applicant’s admitted prior art and Okada disclose every feature discussed in claim 13, and Okada further teaches the networked component comprises the printer server (i.e., a print server “5 in fig. 1” which would inherently be the network component because that device processes the print jobs via the network 1 in fig. 1 “col. 3, lines 17-20 and col. 5, lines 7-11”).

As to claim 16, Applicant’s admitted prior art and Okada disclose every feature discussed in claim 13, and Okada further teaches the networked component comprises the printer controller (i.e., a print server “5 in fig. 1” which would inherently be the network component and which would be considered as a printer controller because that device receives the print jobs from via the network 1 “fig. 1 and col. 5, lines 7-11” and distributes the print jobs to the printers “6 and 7 in fig. 1” “col. 3, lines 17-20 and col. 4, lines 4-8”).

6. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s admitted prior art (pages 1-3 of Background of the Invention) in combination with Nakamura (US Patent No. 6,678,066 B1).

As to claim 7, Applicant’s admitted prior art teaches an apparatus (fig. 1) for improved network printing comprising:

a plurality of client machines (1 in fig. 1) connected to a network (4 in fig. 1, page 2, lines 12-13);

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a printer (2 in fig. 1) connected to the network by a network interface controller (3 in fig. 1; page 2, lines 14-16);

a printer server (7 in fig. 1) connected to the network (2 in fig. 1 indicates the printer sever 7 connected to the network 4);

a printer controller (5 in fig. 1) connected to the printer (page 2, lines 10-12);

However, Applicant's admitted prior art does not teach a filter embedded in a memory of at least one of the plurality of workstations (i.e., client machines 1 in fig. 1).

Nakamura, in the same field of endeavor "print processing", teaches a filter (i.e., the function of print processing section 12 in fig. 2) embedded in a memory (i.e., the HD 3 in fig. 1; col. 4, lines 34-40) of at least one of the plurality of workstations (i.e., a host computer 1 in fig. 1) (it is noted that the print control device 10 includes the function of a print processing section 12 "col. 4, line 66 to col. 5, line 1". The print control device 10 "fig. 2" is controlled by the print control program embedded in the HD 3 "col. 4, lines 34-40" which is installed from a flexible disc or a CD-ROM "col. 4, lines 53-59". The function of the print processing section "12 in fig. 2" which would be considered as the filter because after the print processing section receives the print job "col. 6, lines 27-28"; it outputs each of the different type of headers in each step of "S101, S102, S105, 106, 109 and S112 in fig. 3", and it also converts one print image into a plurality of command groups "step of S103 in fig. 3; and col. 6, lines 32-33"; and it further checks the contents of the print job in the order of the condition of each print image and each print page "col. 6, lines 36-47, and steps of S107 and S110 in fig. 3").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the workstation 1 of Applicant's admitted prior art to provide a

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filter “i.e., a function of the print processing section 12” embedded into a memory for processing the print job as taught by Nakamura. The suggestion for modifying the workstation of Applicant’s admitted prior art can be reasoned by one of ordinary skill in the art as set forth above by Nakamura because the modified workstation would increase the functionalities and efficiencies of the printing system by having the header analyzer for classifying the different types of print data from the generated applications. Such a modification allows the host computer to prepare the proper printing before transferring the print jobs to the network.

As to claim 8, Applicant’s admitted prior art and Nakamura disclose every feature discussed in claim 7, and Applicant’s admitted prior art further teaches the network comprises a Local Area Network (page 2, line 9).

As to claim 9, Applicant’s admitted prior art and Nakamura disclose every feature discussed in claim 7, and Applicant’s admitted prior art further teaches the network comprises a Wide Area Network (page 2, lines 9- 10).

As to claim 10, Applicant’s admitted prior art and Nakamura disclose every feature discussed in claim 7, and Nakamura further teaches the filter (the function of the print processing section 12 in fig. 2) is adapted to check for any errors preventing proper printing in a print job before the print job is outputted to the network (i.e., the printer connecting to the host computer 1 via the network is indicated on col. 4, lines 25-26) (it is noted that figure 3 indicates the process procedure by the print processing section 12 “col. 6, lines 23-25”. In the three conditions “S104, S107 and S110 in fig. 3” are checked to the contents of the print job by the function of the print processing section 12, in which if the condition of “the last command stream arrive” is not satisfied at step of S104 and then the print processing section 12 adds a continuous packet header

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to each print command stream at step of S105 "col. 6, lines 32-34". In brief, the print processing section 12 "or the filter" would be adapted to check for any errors preventing proper printing in a print job before the print job is outputted to the network).

As to claim 11, Applicant's admitted prior art and Nakamura disclose every feature discussed in claim 7, and Nakamura further teaches the filter (the function of the print processing section 12 in fig. 2) is adapted to fix any errors preventing proper printing in a print job before the print job is outputted to the network (i.e., the printer connecting to the network is indicated on col. 4, lines 25-26) (it is noted that figure 3 indicates the process procedure by the print processing section 12 "col. 6, lines 23-25". In the three conditions "S104, S107 and S110 in fig. 3" are checked to the contents of the print job by the function of the print processing section 12, in which if the condition of "the last command stream arrive" is not satisfied at step of S104 and then the print processing section 12 adds a continuous packet header to each print command stream at step of S105 "col. 6, lines 32-34". In brief, the print processing section 12 "or the filter" would be adapted to fix any errors preventing proper printing in a print job before the print job is outputted to the network).

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Q. Tran whose telephone number is (703) 305-4857 or E-mail address is Douglas.tran@uspto.gov.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Douglas Q. Tran

Mar. 15, 2004

